Companion Modelling to facilitate understanding of grazing land conflict in Sheythimi, Radi, Eastern Bhutan

Resource management issue

• More than 3,000 acres of natural pasture situated between Radi & Merak serves as traditional grazing ground for cattle of Radi during summer & yak from Merak during winter.
• Overgrazing & indiscriminate lopping of trees lead to degradation of natural pastures in upper catchment of Radi. High runoff during monsoon accelerated ravine development.

• Serious conflict between yak & lower cattle herders has impeded local conservation of grazing land.

Figure 1. Overgrazed pasture in Sheythimi.

Socio-ecological setting

• Radi farmers grow rice & raise small herds of cattle.
• Above them, Merak farmers operate a pastoral system & migrate with large yak herds during winter.

Figure 2. People of Radi (left) & Merak (right).

Objectives

• To establish collective understanding of grazing pressure between herders.
• To improve communication & mobilization of the two communities in pasture land management.
• To facilitate negotiation with new perspective shared by stakeholders.

Phases of the ComMod process

• ComMod in Radi started with situational analysis, visits to herders & discussions on the issue at stake.
• ComMod training for researchers was used to simultaneously develop a Role Playing Game (RPG) for Radi.
• The RPG output of this training was used to initiate discussion in a participatory field workshop, leading to the redefinition of game board & its use in successive sessions.
• Development of a collective pasture management plan.

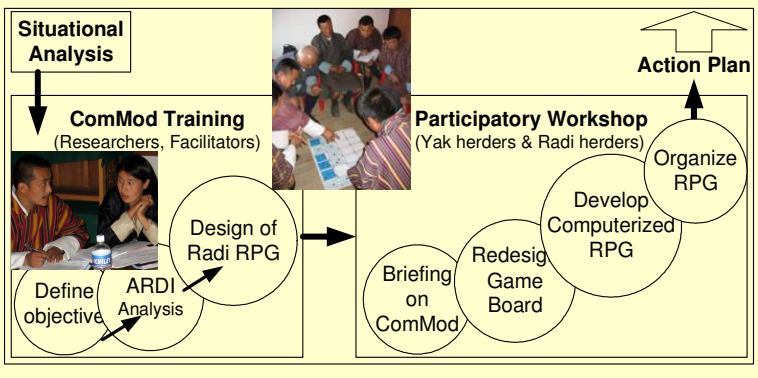
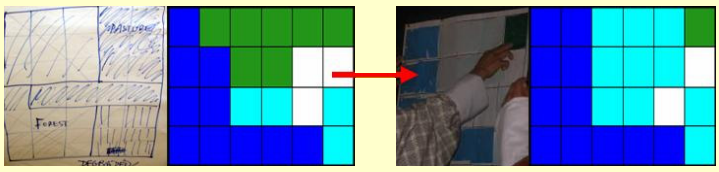


Figure 3. Application of ComMod process in Radi.

Evolution of the game board for Radi RPG

• ComMod trainees collectively proposed a 4 x 6 matrix representing forest, pasture & degraded land.
• Playing herders rejected the game board proposed by officials & redesigned it to represent grazing land with 1 best grazing resource plot, 11 medium, 10 poor & 2 degraded plots - almost like the real setting.



Initial board proposed by trainees — Players redesign the game board

Figure 4. Co-designing the game board.

Gaming & simulation sessions

3 sessions was played with different modes of communication: first individual community mode, second same with land management option (fencing for regeneration) & third two communities playing together with land management option.

Receive animal → Discuss & play → Data transfer → Receive the benefit → Present results

Figure 5. Successive steps in a round of play of Radi RPG.

Influence of communication on the resource state

• Community mode with management option helped to sustain the resource & to limit land degradation.
• Collective mode helped to improve resource state & promoted landscape change.
• Players acquired new knowledge on potentials for collective management to sustain the resource base.

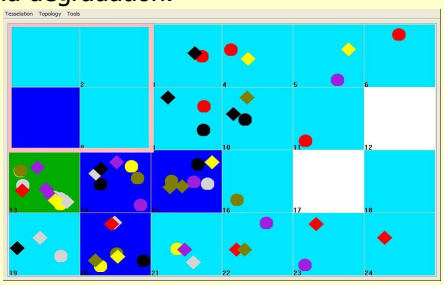


Figure 6. Computer interface showing resource state after 5 rounds of play.

Collective action plan

Players agreed to fence degraded grazing land, but their plan could not be implemented due to the scale of the problem. Currently development projects addressing this issue are being implemented.

References

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Authors & institutions

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